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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/770,621	02/02/2004	Jacob Klimstra	AWEK 2831	2309
7812	7590	08/24/2005	EXAMINER	
SMITH-HILL AND BEDELL, P.C. 16100 NW CORNELL ROAD, SUITE 220 BEAVERTON, OR 97006			STRICKLAND, JONAS N	
			ART UNIT	PAPER NUMBER
			1754	

DATE MAILED: 08/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/770,621

Applicant(s)

KLIMSTRA ET AL.

Examiner

Jonas N. Strickland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/04; 5/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito et al. (JP 62106826 A).

Applicant claims a method of operating an internal combustion engine having an oxidation catalyzer, comprising: operating the engine and directing exhaust gases of the internal combustion engine through the oxidation catalyzer and thereby heating the catalyzer, and subsequently stopping the engine and regenerating the catalyzer by supplying reducing gas to the catalyzer while the catalyzer is still sufficiently hot for regeneration to occur.

Saito et al. discloses a process for the efficient denitration by contacting a nitrogen-oxide gas with a catalyst in the presence of oxygen to oxidize and absorb nitrogen oxides by the catalyst and stopping the exhaust gas from an engine (stopping the engine) when absorbing efficiency is lowered to allow a reducing gas, such as hydrogen to flow and performing the reductive removal of accumulated nitrogen oxides, as the catalyst is regenerated. The reducing agent is produced by a process that is independent of operation of the engine (see abstract).

Claim Rejections - 35 USC § 103

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito et al. (JP 62106826 A) in view of Debbage et al. (US Patent 5,762,885).

Applicant claims with respect to claims 2 and 3, wherein measuring the temperature of the oxidation catalyzer and controlling supply of reducing gas to the

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catalyzer is in dependence on the measured temperature of the catalyzer. The teachings of Saito et al. have been discussed with respect to claims 2 and 3, however the reference does not disclose wherein temperature determines controlling the supply of reducing gas.

Debbage et al. teaches an apparatus for removing contaminants from a gaseous stream. Debbage et al. continues to disclose using a catalyst absorber, which absorbs oxidized oxides of nitrogen (see abstract and col. 2, lines 64-67). Debbage et al. continues to disclose wherein the regeneration is accomplished by passing a reducing gas through the catalyst absorber, and wherein the method of gaseous regeneration are employed depending on the temperature zone in which the catalyst absorber resides and wherein the supply of the reducing gas may be terminated based on the measured temperature (col. 6, lines 1-13).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the teachings of Saito et al., based on the teachings of Debbage et al., by measuring the temperature of the oxidation catalyzer and controlling the supply of reducing gas to the catalyzer in dependence on the measured temperature of the catalyzer, because Debbage et al. discloses wherein the regeneration of a catalyst is accomplished by passing a reducing gas through the catalyst absorber, and wherein the method of gaseous regeneration is dependent upon the temperature zone in which the catalyst absorber resides. Debbage continues to teach wherein the supply of the reducing gas may be terminated during the regeneration process, based on the temperature. Such modification would have been obvious to one of ordinary skill in the art, because one of

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ordinary skill in the art, would have expected a process for reducing nitrogen oxides as taught by Debbage et al., to have been similarly useful and applicable to a process for reducing nitrogen oxides and a regeneration process for the catalyst as taught by Saito et al., which also teaches a process for reducing nitrogen oxides, and a regeneration process for the catalyst.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonas N. Strickland whose telephone number is 571-272-1359. The examiner can normally be reached on M-TH, 7:30-5:00, off 1st Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jonas N. Strickland
August 19, 2005


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